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MONTHLY REPORT

1 September - 30 September 1956

INSTALLATION AND MAINTENANCE BRANCH  
ENGINEERING DIVISION

This marks the first monthly report submitted by the Installation and Maintenance Branch.

MECHANICAL MAINTENANCE SECTION

This Section performed the following:

1. Completed the antenna mast at Shop.
2. Installed fuel tank filler pipe on emergency generator at South Building, in order to fill tank from ground level.
3. Approximately 75% finished with the fabrication of a (dummy load) or test panel for generators which will take generators from about 5 to 60 KW.
4. Carried out regular inspections and maintenance program for Washington Area generators.
5. Serviced all machinery at the Installation and Maintenance Shop at [REDACTED] and cleaned Shop as per routine.
6. Tested engine generators on two type 6-ST Mobile Communication Systems.
7. Moved the fuel oil supply trailer from "L" Building to Shop and reworded as needed, relocated transfer pump, repaired fittings and hose, etc.

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ELECTRONIC MAINTENANCE SECTION

This Section performed the following:

Washington Disaster Plan Installations

1. Regular maintenance visits were made to all microwave installations, minor defects noted were repaired and all equipment tested.

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1. Due to the resignation of a [REDACTED] Technician, a Technician from this Division was assigned TDY to become familiar with the Microwave System for the period covering 17 September to 27 September 1956. Until PCS Technician is available maintenance will be handled from Washington.

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25X1A6b

[REDACTED] Antenna Maintenance.

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1. The bid from [REDACTED] has not been received from [REDACTED]

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25X1A

Equipment Transfer of [REDACTED]

1. No further information available at this time.

SO-8 Radar Installation

1. This unit is to be installed in [REDACTED] with the antenna located on top of the building. The wave guide and fittings are not available and will have to be procured from the Navy Department before this installation can proceed.

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25X1A6a

Station [REDACTED]

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1. The towers were surveyed by the [REDACTED] representatives, [REDACTED] of Real Estate and Construction Division of the Office of Logistics and [REDACTED] of Engineering Division. The subject of these visits were to effect a bid by the [REDACTED] for a repair and maintenance contract of the towers located at Stations [REDACTED].

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2. Microwave outages on the TOT and L.A.B. circuits have been reported. After making close checks it is believed the difficulties are in the land lines connecting the Signal Center with Station [REDACTED]. The Wire Section has been contacted and they have notified the Telephone Company.

Frequency Instability of Motorola Multiplexing Equipment

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1. Tests have been initiated to determine if the AFC multiplexing equipment installed in the 6ST Vans located at [REDACTED] Warehouse, Installation and Maintenance Shop, are subject to frequency instability. No conclusive results can be given at this time.

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Service Contract

1. No further information available at this time.

HT-4 Transmitter Modification

1. Eight of the HT-4 transmitters have been modified for operation on the 18-30 MC band and have been returned to [REDACTED] Warehouse. One HT-4 could not be modified due to the lack of one modification kit which was not delivered to the Installation and Maintenance Shop. This should be completed during the next month.

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Conelrad

1. This unit is under test to determine why it goes into periodic conelrad operation. A recording voltmeter had been installed at the Signal Center to determine if the failure is due to voltage fluctuations. If this is the case a voltage stabilizing unit will be employed to correct this fault.

VHF Security Office Disaster Net

1. A Motorola PA-8270-J remote consolette had been installed in Room 228 Administration Building to enable that Office to contact the security cars. A modification will be performed on this consolette to permit the use of the Quick Call method for contacting their cars.

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2. A Sola voltage regulating transformer has been procured and will be installed at [REDACTED] to correct the voltage fluctuation problems there.

Maintenance of the Trylon Towers

1. The tower sites located on East, Administration, South and Central Building were made available to two contractors so they could inspect and bid on a contract covering the repair and maintenance of these towers.

I Building Antenna

1. The ground plane antenna for Support Branch, Operations and Training Division has been re-installed using a 1½" TV mast and base plate for the mounting of the antenna.

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### Voice Security Project

1. Regular maintenance visits were performed, all defects corrected and all equipment tested. Two of the fifteen handsets needed as extensions have been procured from N.S.A. and they advise that more handsets will be available approximately 15 November 1956 and spare parts for the existing handsets will be available in October. Four 801 units have been moved to Rooms 221, 203, 354 Administration Building and Room 1206 "L" Building awaiting installation of the Telephone Co. lines. Receptacles and connectors have been purchased for the modification enabling the plug-in operation of the handsets and four 801 units have been modified to date. The Telephone Company will try to have the nine telephone lines requested, installed on or about 1 October 1956. N.S.A. has been contacted regarding the delivery of the five more 801 units and one PAX, type 32A21 Telephone switchboard. The delivery date will be approximately 4 October 1956. The telephone extension lines have been installed in General Cabell's Office. This is a pre-installation procedure to enable a more efficient installation of the 801 units.

### WIRE MAINTENANCE SECTION

#### Alcott Hall (Shop)

1. Preventative maintenance was performed on all machine serviced from the Shop.
2. Fifty-three reported troubles were cleared on the equipments.
3. The following equipments were returned to the Shop for overhaul and reconditioning:
  - a. Four each Model 15 printing units.
  - b. Two each Model 14 printing units.
  - c. Two each Model 28 printing units.
4. Four teletype parts requisitions of thirty eight items were processed to the Field.
5. Washington Disaster Plan had no activity this month.

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6. The Tiny Tot program had no activity this month, awaiting conversion parts for keyboards.

7. Sixty four hours was spent on Project [REDACTED] rearranging equipment. One additional full duplex channel was installed to Andrew's Air Force Base. One Sigtot, removed from Signal Center "L" Building, was installed in Signal Center project [REDACTED]. One Tiny Tot removed from 2203 "Q" Building was installed at Project [REDACTED] Signal Center. One TD-reperferator set, one TD with base, and one reperferator removed from Shop was installed at Project [REDACTED] Signal Center.

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9. Six TD-reperferator sets were overhauled for PTI to Warehouse.

#### Signal Center

1. Preventive maintenance was performed on all machines as per schedule.

2. Seventy five reported troubles were cleared with Signal Center.

3. One on-line Sigtot was removed from the special Signal Center and installed in the [REDACTED] Signal Center at 1717 "H" St.

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4. On the 17th of September an evening maintenance shift was established. At the present time it consists of one man working from 1530 to 2400 hours, daily Monday thru Friday. This man works out of Signal Center but covers all stations in the Washington Area. The results of this shift have been very gratifying in the two weeks it has been utilized as fifteen troubles were cleared within Signal Center and eighteen troubles were cleared in the area. This not only relieved the trouble load the following morning but cleared the machines used for that night.

5. Two permanent maintenance men were assigned to Signal Center on the 17th of September working days. Their shift is from 0700 to 1530 hours. They work staggered work weeks of ten days on and four off. This coupled with the addition of the evening shift has given Signal Center seventeen hours per day coverage except Saturday and Sunday, thereby eliminating all but emergency overtime. The results of the improved maintenance is also reflected in the number of troubles reported, the troubles reported in Signal Center has dropped forty per cent in this short period.

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T-32

1. Preventative maintenance was performed on all machines as per schedule.

2. Seventy eight reported troubles were cleared on the equipments.

3. Twelve Model 28 printing units were ordered for installation in T-32. Delivery will be sometime in October.

*Have backed off on this-*

4. Experiments on the high speed operation of Model 28 equipments were carried out and proved satisfactory to a point. The effect of high speed on machine outage and increased maintenance was explained fully to personnel of Supplemental Programs Division and they decided to go ahead with the speed up, hoping to increase traffic clearance percentage, even with a greater machine outage. Work is starting on speeding up one hundred and fifty Model 28 machines beginning 1 October and target for completion is set for 1 November.

MISCELLANEOUS

Not applicable.

ADMINISTRATIVE

TDY

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